

DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER BUREAU  
SUPPLYING WATER TO THE PUBLIC

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of the Michigan Administrative Code are amended as follows:

#### PART 8. GROUNDWATER SOURCES

R 325.10801 Purpose.

Rule 801. The purpose of this part is to establish certain requirements and objectives for the isolation and construction of wells ~~which shall be met~~ **used** by public water supplies to provide a continuous, adequate quantity of water meeting the state drinking water standards.

R 325.10802 Applicability; approval of deviation from minimum standards and requirements.

Rule 802. (1) ~~The provisions of this part apply~~ **ies to public water supplies that use** to wells ~~used~~ to supply groundwater for a public water supply. ~~These rules are~~ **This part sets** minimum standards and requirements ~~which shall be considered by the department in the issuance of~~ **to be met to receive** permits or approvals **from the department** for waterworks

systems. **For the purpose of this part, a supplier of a proposed public water supply is considered a public water supply.**

(2) Deviations from the minimum standards and requirements ~~prescribed by~~ **in** this part may be approved by the department ~~upon a showing by an owner of~~ **if** a public water supply **demonstrates** that a deviation will not adversely affect the public health. Deviations from this part shall be by permit condition for type I or type II public water supplies, and in writing by the department for type III public water supplies.

R 325.10804 Type III public water supplies; applicability of other rules.

Rule 804. ~~Suppliers of water of type~~ **Type III** public water supplies shall comply with the applicable provisions of rules of the department promulgated pursuant to Act No. 294 of the Public Acts of 1965, as amended, being §§325.221 to 325.240 of the Michigan Compiled Laws, and entitled "Part 1. Well Construction Code," being **part 1 well construction code, being R 325.1601 to R 325.1676 promulgated under part 127 water supply and sewer systems of 1978 PA 368, as amended, being MCL 333.12701 to 333.12715** of the Michigan Administrative Code, except where specific requirements for type III public water supplies prescribed by this part are more restrictive.

R 325.10805 Retroactivity of rules; significant changes or major repairs made to existing well; utilization of well not in compliance with this part.

Rule 805. (1) This part is not retroactive for individual well installations constructed before ~~the effective date of these rules except~~ **January 12, 1978 unless 1 or more of the following conditions exists:**

- (a) ~~When water quality from the well does not meet the state drinking water standards.~~
- (b) ~~Upon a determination by the~~ **The** department **determines** that continued use of a well represents a health hazard, ~~or.~~
- (c) ~~When a~~ **A** well is found to be in violation of previous rules of the department which **that** were in effect at the time of construction.

(2) Significant changes or major repairs made to an ~~existing well after the effective date of these rules that existed before~~ **January 12, 1978** shall conform to the provisions of this part. ~~These~~ **Significant** changes shall include, but are not necessarily limited to, replacing the casing, modifying the depth of a well, installing new pumping equipment of a different type or of higher capacity, or modifying the pump setting. In general, a significant change or major repair shall be considered to have occurred if the pumping capacity is increased above the original capacity as a result of the work. A significant change or major repair shall not include routine maintenance or incidental repairs.

(3) A ~~supplier of water~~ **public water supply** proposing to utilize water from a well or well field not in compliance with this part may be required to provide continuous treatment of the water in a manner acceptable to the department and shall obtain written approval from the department before utilizing that well or well field as part of a public water supply.

(4) A ~~supplier of water~~ **public water supply** employing a complete treatment system to treat a groundwater source may be granted special consideration by the department for the location and construction of wells used as a raw water source ~~prior to~~ **before** treatment.

R 325.10806 Change in classification of public water supply.

Rule 806. Requirements or criteria ~~prescribed by~~ **of** this part for the various types of public water supplies shall be based on the facilities which the public water supply is intended to serve. If the volume of water used or the type of facilities or number of units served by a public water supply changes in such a way as to cause a change in the classification of a public water supply, the ~~supplier of water~~ **public water supply** shall meet requirements applicable to the new classification.

R 325.10809 Standard isolation area; modification; approval.

Rule 809. (1) Modifications of the standard isolation area, if any, shall be determined for a site based on a study of hydrogeological conditions provided to the department by a ~~supplier of water pursuant to~~ **public water supply under R 325.10813 and R 325.10814.**

(2) The department may require an increase or approve a decrease in the standard isolation area of a well.

(3) Approval of the isolation area shall be obtained from the department before construction of a production well used for drinking or household purposes as part of a public water supply.

R 325.10810 Standard isolation area for type I public water supplies; ownership or control.

Rule 810. (1) A ~~supplier of water of a type I public water supply shall be required to own~~ the approved isolation area except as provided by subrule (2) to prevent use of the property which could result in contamination of the public water supply.

(2) If a ~~supplier of water of a type I public water supply~~ adequately demonstrates to the department that ownership of the isolation area is not possible, adequate control of the isolation area shall be required. Adequate control may be a long term lease or easement including provisions to prevent use of the isolation area which could result in contamination of the well.

R 325.10812 Location of wells with respect to major sources of contamination.

Rule 812. Wells serving type I and type IIa public water supplies shall be located a minimum distance of 2,000 feet, and wells serving type IIb and type III public water supplies shall be located a minimum distance of 800 feet, from known major sources of contamination, including, but not limited to, large scale waste disposal sites, land application of sanitary wastewater or sludges, sanitary landfills, and chemical or waste chemical storage or disposal facilities. ~~Based on hydrogeological studies, the~~ **The** department may require an increase or approve a decrease in the 2,000 foot distance for type I or type IIa public water supplies or the 800 foot distance for type IIb or type III public water supplies **based on a study of hydrogeological conditions or other methods approved by the department for identifying the capture zone of a well.**

R 325.10813 Study of hydrogeological conditions by ~~supplier of water of type I and type IIa~~ public water supplies.

Rule 813. (1) A ~~supplier of water of a type I or type IIa public water supply shall prepare a study of hydrogeological conditions for determination of an isolation area and the acceptability of a proposed test well location of a well.~~ The study shall be provided to the department and approval obtained.

(2) Previous studies of hydrogeological conditions **that meet the criteria and intent of this rule shall** ~~may~~ be considered by the department in determining the scope of or need for a study ~~required by this rule.~~

(3) A study of hydrogeological conditions shall mean investigations and a compilation and evaluation of data necessary to determine the isolation area, **the** acceptability of a **test** well location and construction, and the availability of water at that location. The study of hydrogeological conditions may include the following:

- (a) The type of public water supply.
- (b) The ~~proposed~~ well capacity **required of the public water supply.**
- (c) The ~~proposed test~~ well depth and well-construction features.

(d) Identification of geological formations, including the thickness and characteristics of the aquifer, the number and thicknesses of protective layers, and if deemed necessary by the department, the areal extent of the protective formations.

(e) Location of the ~~test~~ well relative to sources of contamination.

(f) Susceptibility of the ~~area~~ **test well location** to flooding.

(g) Depth to the water table from the established ground surface.

(h) Proximity of the well to surface water.

(i) ~~A yield~~ **An aquifer** test of the well in accordance with R 325.10830.

(j) Water quality analyses.

**(k) Identification of the contributing area to a well based on ground water flow simulations using a computer model as approved by the department.**

**(l) The location of the test well as a latitude and longitude expressed in degrees-minutes-seconds or degrees-decimal degrees to five significant digits.**

(4) The scope of the hydrogeological study may vary depending upon the capacity of the ~~proposed well~~ **required of the public water supply** in relation to the aquifer capacity, the need for a modification of a standard isolation area, or other factors; and may include additional determinations required by the department, such as the general aquifer characteristics and interference relative to other wells **and surface waters** in proximity to the well site.

**(5) Where an adverse resource impact, as defined in section 32701, of the natural resources and environmental protection act, 1994 PA 451, MCL 324.32701 is likely to occur the department may require the public water supply to provide for the collection of stream or river flow measurements on stream segments likely impacted by the operation of a well or wells by the supplier of water. Flow measurements shall be required on no more than 2 potentially impacted stream segments selected at the discretion of the department. Where required the public water supply shall provide not less than 5 miscellaneous measurements of flow taken at a frequency of once a month covering the period from June through October. The public water supply may be required to provide flow measurements at a frequency and duration not to exceed continuous monitoring of flow for 6 months prior to and 1 year after the well or wells are put in service.**

R 325.10814 Studies of ~~suppliers of water of type IIb and type III public water supplies.~~

Rule 814. If a modification of the standard isolation area is requested by a ~~supplier of water of a type IIb or type III public water supply,~~ the ~~supplier~~ **public water supply** shall submit to the department and obtain approval for a study of hydrogeological conditions consistent with the capacity of the well and the capacity of the aquifer, **and may include identification of the contributing area to a well serving the type IIb or type III public water supply based on groundwater flow simulations using a computer model as approved by the department.**

R 325.10815 Procedures for department approval of ~~a proposed well for~~ **the conversion of a test well to a production well serving** type I and type II public water supplies.

Rule 815. (1) ~~In reviewing~~ **To receive department approval of** the location and acceptability of a ~~proposed test well for~~ **conversion to a production well serving** a type I or type II public water supply, ~~the department shall determine whether the following procedures have been followed by a supplier of water~~ **conditions shall be met:**

(a) Approval has been obtained from the department for ~~each proposed~~ **the** land parcel on which ~~a the~~ test well is ~~to be~~ located.

(b) For type I public water supplies, ownership or adequate control as required by R 325.10810 or an option for ownership or adequate control of the required isolation area has been secured **for the land parcel on which the test well is located.**

(c) Where required, a study of hydrogeological conditions **has been conducted that includes identification of the capture zone of the proposed production wells and** has been approved by the department.

(d) Satisfactory ~~yield-aquifer~~ tests have been completed on the test well or the well capacity has been established to the satisfaction of the department **by other means.**

(e) Water quality analyses show results meeting the state drinking water standards.

(2) When the department finds that a ~~proposed test~~ well, its location, and its construction features meet the requirements of this part, the department ~~shall~~ **may** authorize construction of a ~~production well or conversion of a~~ test well to a production well **and, where necessary, the construction of additional production wells at the location.**

R 325.10823 Flowing artesian wells; well construction.

Rule 823. In areas where flowing artesian wells are commonly encountered, the well construction methods proposed by a ~~supplier of water~~ **public water supply** to protect a flowing artesian aquifer and confining strata shall be submitted to the department ~~by the supplier of water~~ and approval obtained prior to the start of construction.

R 325.10828 Casing vents; sampling tap; relief valves.

Rule 828. (1) Casing vents shall be:

(a) Provided on all wells and constructed to prevent the entrance of contaminants into the well.

(b) Extended to the outside atmosphere above the roof level if toxic or flammable gases are present.

(2) Provisions shall be made for collection of **raw** water samples by installation of a proper sampling tap in a convenient location as close to each well as possible. **Provisions shall be made for collection of finished water samples by installation of a proper sampling tap at each entry point to the distribution system.**

(3) Air-vacuum relief valves, where used, shall be constructed to prevent entrance of contaminants into the well.

R 325.10830 ~~Yield-Aquifer~~ or performance testing requirements.

Rule 830. (1) Each well constructed to serve a public water supply shall ~~be tested for yield-und~~ **ergo an aquifer test** or performance **test**, by a method approved by the department, after installation of a production well and prior to use of a well to supply water to a waterworks system.

(2) For type I and type IIa public water supplies, ~~yield-aquifer~~ tests or performance tests shall be performed on the test well or production well. The tests may be required to:

(a) Determine the adequacy of well depth and development.

(b) Secure water samples for quality analyses.

(c) Determine well capacity and production on a long term basis.

(d) Determine drawdown.

(e) Select permanent pumping equipment.

(f) Evaluate well efficiency.

(g) Assure proper utilization and protection of groundwater aquifers.

(3) For type IIb and type III public water supplies, ~~yield-aquifer~~ tests or performance tests of wells shall demonstrate that water can be safely withdrawn from an aquifer in sufficient quantity to provide water for drinking and household purposes and of a quality meeting the state drinking water standards.

R 325.10831 New or reconditioned well; disinfection; water samples.

Rule 831. (1) A new or reconditioned well or pump installation or well facility which is opened for maintenance or inspection shall be pumped to waste until the water is as clear as reasonably possible. Thereafter, the well and pumping equipment shall be properly disinfected.

(2) Before placing a new or reconditioned well or a well facility which is opened for maintenance or inspection into service, **all of the following shall occur:**

**(a) Testing shall show the water to be free of chlorine before collection of each bacteriologic sample.**

**(b) ~~not less~~ Not fewer** than 2 consecutive water samples for bacteriological analyses shall be collected from the ~~installation well or well facility~~ **24 hours apart, unless an alternate interval is approved by the department.**

**(c) ~~and each~~ Each** analysis shall not indicate the presence of coliform. Analyses for other contaminants may be required by the department.

## PART 9. SURFACE WATER SOURCES

R 325.10902 Applicability; approval of deviations from minimum standards and requirements.

Rule 902. (1) ~~The provisions of this part apply~~**ies** to all public water supplies utilizing surface water sources. ~~These rules are~~**This part sets** minimum standards and requirements ~~which shall be considered by the department in the issuance of~~**to be met to receive** permits or approvals **from the department** for waterworks systems or portions thereof **of waterworks systems. For the purpose of this part, a supplier of a proposed public water supply is considered a public water supply.**

(2) Deviations from the minimum standards and requirements ~~prescribed by~~**of** this part may be approved by the department ~~upon a showing by an owner of~~**if** a public water supply **demonstrates** that a deviation will not adversely affect the public health. Deviations from this part shall be by permit condition for type I and type II public water supplies, and in writing by the department for type III public water supplies.

R 325.10904 Retroactivity of rules.

Rule 904. This part is not retroactive for intakes in surface water sources constructed ~~before the effective date of these rules~~**January 12, 1978, except upon a determination by** **unless** the department **determines** that continued use of the intake or surface water source poses a health hazard.

R 325.10905 ~~Sanitary survey~~**Assessment** of proposed surface water source.

Rule 905. (1) ~~A sanitary survey~~**An assessment** of a proposed surface water source shall be performed by the ~~owner of a~~ public water supply. The scope or need for the ~~sanitary survey~~**assessment** shall be established in advance by the department after consultation with the owner.

(2) All of the following shall be determined for each alternate location of a surface water intake:

- (a) The normal water quality.
- (b) Any significant variations in water quality.
- (c) Any existing or potential hazards to public health.
- (d) The suitability of the water for treatment.
- (e) The availability of an adequate and dependable source.



(3) Previous ~~sanitary surveys~~ **assessments** of the same surface water source may be considered by the department in determining the scope or need for ~~a sanitary survey~~ **an assessment** required by subrule (1).

(4) The results of the ~~sanitary survey~~ **assessment** shall be submitted to the department for review, and approval shall be obtained prior to the issuance of a permit for the construction or use of an intake in a surface water source.

(5) Where the water quality of the proposed surface water source is unknown, the department may require sampling and analyses by the ~~supplier of water~~ **public water supply** for a period not to exceed 1 year to determine water quality and suitability of the water for treatment.

## PART 10. TREATMENT SYSTEMS AND PUMPING FACILITIES

R 325.11001 Purpose.

Rule 1001. The purpose of this part is to establish requirements ~~to be met by suppliers of water providing for the~~ treatment of surface water sources or other sources of water requiring treatment, and to establish requirements for water pumping facilities operated by ~~suppliers of water to provide a continuously adequate quantity of water meeting the state drinking water standards.~~

R 325.11002 Applicability; approval of deviations from minimum standards and requirements.

Rule 1002. (1) ~~The provisions of this part applies to~~ **public water supplies regarding** subpart H systems, ~~to certain other treatment systems, and to all water pumping facilities. These rules are~~ **This part sets** standards and requirements ~~which shall be considered by the department when issuing~~ **to be met to receive** permits or approvals **from the department** for waterworks systems. **For the purpose of this part, a supplier of a proposed public water supply is considered a public water supply.**

(2) Deviations from the minimum standards and requirements ~~prescribed by~~ **in** this part may be approved by the department ~~upon a showing by an owner of a~~ **if the** public water supply **demonstrates** that the deviation will not adversely affect public health.

(3) Any deviations to the requirements for treatment of water sources shall not be in conflict with these rules.

R 325.11006 Rated capacity of a complete treatment system.

Rule 1006. (1) The department shall establish the rated capacity of new or existing complete treatment systems.

(2) The department shall notify the ~~supplier of water~~ **public water supply** of its determination of rated capacity ~~within 1 year from the effective date of these rules or on the permit for a new complete treatment system or on the permit for an existing complete treatment system which undergoes alterations which affect rated capacity.~~

(3) The rated capacity of the complete treatment system is the smallest of the following rated capacities for each element or unit of the system:

(a) Intake. The rated capacity of the intake is the lesser of the intake capacity at the 100 year drought elevation or the intake capacity at the time of the lowest recorded elevation of surface water at the point of intake.

(b) Raw water supply. The rated capacity of the raw water supply is the firm capacity of raw water pumping units or the total flow from a system supplying raw water by gravity under minimum source water elevation conditions.

(c) Treatment processes. The rated capacity of treatment processes including coagulation, precipitation, sedimentation, and filtration is the established maximum

allowable treatment rate. Where less than 4 filters are provided, the rated capacity of the filters is the maximum allowable treatment rate with the largest filter removed from service.

(d) Finished water supply. The rated capacity of the finished water supply to the distribution system or storage is the firm capacity of pumping systems or the total flow from a system supplying finished water by gravity under the limiting head condition.

R 325.11007 Retroactivity of rules.

Rule 1007. ~~R 325.11006 and R 325.11008 is~~**are** not retroactive for ~~existing complete treatment systems except upon a determination by~~**constructed before January 12, 1978, unless the department determines** that continued use of the existing system represents a health hazard.

R 325.11010 Applicability of pumping facility.

Rule 1010. R 325.11011 and R 325.11012 apply to all raw water, **and** finished water, ~~and distribution system~~ pumping installations in type I ~~and type IIa~~ public water supplies, ~~except and to~~ distribution system pumping facilities **in type I public water supplies** where service is provided to ~~less than 50 or more~~ service connections or to ~~less than 200 or more~~ individuals **until January 1, 2016. R 325.11011 and R 325.11012 apply to all raw water, finished water, and distribution system pumping installations in type I public water supplies beginning January 1, 2016.**

R 325.11011 Pumping facility; capacity.

Rule 1011. ~~(1)~~A pumping facility shall have sufficient capacity to meet the service area demands with the largest unit removed from service.

~~(2) Compliance with this rule for public water supplies in operation on the effective date of these rules shall be achieved by January 1, 1985.~~

R 325.11015 Pumping facility; pressure.

Rule 1015. (1) All finished water pumping facilities shall be designed to maintain a minimum pressure of 5 psi gauge in all buried suction piping and suction piping subject to flooding.

(2) For finished water pumping facilities taking direct suction from a distribution system, ~~an adequate pressure~~**a minimum pressure of 35 psi under normal operating conditions and 20 psi during emergencies such as fire fighting** shall be maintained in the distribution system on the low pressure side of the facility.

R 325.11016 Protection of treatment systems and pumping facilities.

Rule 1016. ~~Suppliers of water~~**Public water supplies** shall take reasonable precautions to protect treatment systems and pumping facilities from trespassers and to prevent introduction of contaminants into the waterworks system.

## PART 11. DISTRIBUTION SYSTEMS AND STORAGE TANKS

R 325.11102 Applicability; approval of deviations from minimum standards and requirements.

Rule 1102. (1) ~~The provisions of this part apply~~**ies** to all public water supplies. ~~These rules are~~**This part sets** minimum standards and requirements ~~which shall be considered by the department in the issuance of~~**to be met to receive** permits or approvals ~~from the department~~**for waterworks systems. For the purpose of this part, a supplier of a proposed public water supply is considered a public water supply.**

(2) Deviations from the minimum standards and requirements ~~prescribed by~~ **in** this part may be approved by the department ~~upon a showing by an owner of~~ **if** a public water supply **demonstrates** that a deviation will not adversely affect the public health. Deviations from this part shall be by permit condition for type I public water supplies, and in writing by the department for type II and type III public water supplies.

R 325.11104 Retroactivity of rules.

Rule 1104. This part is not retroactive for ~~existing~~ distribution systems and water storage tanks ~~except upon a determination by~~ **constructed before January 12, 1978, unless** the department **determines** that continued use of a distribution system or storage tank poses a health hazard.

R 325.11105 Capacity of distribution system; fire hydrants; inadequately sized watermain.

Rule 1105. (1) Distribution systems shall have sufficient capacity to meet peak demands, including fire flow demands where fire protection is provided, while continuously maintaining ~~positive pressure adequate for service~~ **a minimum of 35 psi throughout the distribution system under normal operating conditions and 20 psi throughout the distribution system during emergencies such as fire fighting.**

(2) The department may prohibit installation of fire hydrants where watermain capacity, system source capacity, storage capacity, or pressure is inadequate to sustain fire flow demands in addition to normal user demands.

(3) Replacement of inadequately sized watermain with watermain of the same size is prohibited.

R 325.11110 Distribution systems; flushing, disinfection, and water analysis.

Rule 1110. (1) Proper techniques shall be followed during construction to keep water mains clean and dry. New water mains shall be flushed thoroughly before disinfection.

(2) Disinfection of new water mains is required.

(3) Before placing a new water main in service, **all of the following shall occur:**

**(a) Before collection of each bacteriologic sample, heavily chlorinated water shall be flushed from the main and appurtenances until the chlorine measurements in the water leaving the main is absent or no higher than that normally maintained in the distribution system.**

**(b) Not fewer** ~~not less~~ **than 2 consecutive water samples for bacteriological analysis shall be collected 24 hours apart unless an alternate interval is approved by the department.**

**(c) Each** ~~and each~~ analysis shall not indicate the presence of coliform. Analyses for other contaminants may be required if the department has reason to believe that these contaminants are present.

(4) ~~The owner of a~~ **A** public water supply in which all or part of a distribution system is not in year round service shall ~~disinfect the distribution system before resuming use.~~ **Bacteriological sampling and analysis shall be performed and shall show results that meet the state drinking water standards before resuming use comply with subrules (2) and (3) before placing the system into service for the season.**

R 325.11111 Distribution system records.

Rule 1111. A ~~supplier of water~~ **public water supply** shall maintain adequate records on the operation of the water distribution system, on the location and type of maintenance performed, and on the type of materials and appurtenances used.

R 325.11117 Storage tanks; disinfection and water analysis.

Rule 1117. (1) Proper techniques shall be followed during construction to keep storage tanks clean and dry.

(2) A finished water storage tank shall be disinfected before initial use and after any internal maintenance or repair activity.

(3) ~~After construction, repair, or maintenance of a storage tank, not less~~ **Before placing a storage tank into service all of the following shall occur:**

(a) **Before collection of each bacteriologic sample, heavily chlorinated water shall be flushed from the tank, drain piping, riser and all other appurtenances until the chlorine measurements in the water leaving the tank is absent or no higher than that normally maintained in the storage tank.**

(b) **Not fewer than 2 consecutive water samples for bacteriological analysis shall be collected 24 hours apart unless an alternate interval is approved by the department.**

(c) ~~Each and each~~ analysis shall not indicate the presence of coliform. Analyses for other contaminants may be required if the department has reason to believe that these contaminants are present.

R 325.11118 Protection of storage tanks.

Rule 1118. ~~Suppliers of water~~ **Public water supplies** shall take reasonable precautions to protect storage tanks from trespassers and to prevent introduction of contaminants into the distribution system or storage tanks.

## PART 12. RELIABILITY

R 325.11202 Applicability; approval of deviations from minimum requirements.

Rule 1202. (1) ~~The provisions of this part apply to all~~ **ies to all** type I public water supplies and are minimum requirements of the department.

(2) Deviations from the minimum requirements ~~prescribed by~~ **in** this part may be approved in writing by the department. **For the purpose of this part, a supplier of a proposed public water supply is considered a public water supply.**

R 325.11203 Study of water supply requirements for type I public water supply; proposal for compliance.

Rule 1203. (1) ~~The owner of a~~ **A** type I public water supply shall conduct a study to determine the quantity of water supply needed for the waterworks system and shall propose a method of compliance in accordance with R 325.11204.

(2) The study required by subrule (1) ~~of this rule~~ shall be based ~~upon 10~~ **on 5 year and 20 year** projections of water use by the public water supply. The study shall be updated every 5 years unless **the owner demonstrates that water use projections are stable and** this requirement is waived by the department.

(3) As a minimum, the information presented in this study shall include all of the following:

(a) **Basic planning data, including current population, number of service connections and equivalent residential units.**

(b) **Sufficient water production and consumption data to identify trends for both 5 year and 20 year planning periods, including the following elements:**

(i) The present and projected average daily demand.

(bii) The present and projected maximum daily demand.

(ciii) The present and projected maximum hourly demand.

(div) The present and projected peak instantaneous demand for systems using hydropneumatic storage.

(ev) The present and projected fire flow demand.

- ~~(vi)~~ The basis of demand projections.
- (vii) Monthly and annual production totals for each source, including water purchased from another public water supply.**
- (viii) Annual usage totals for water supplied to other public water supplies.**
- (ix) Annual usage totals for each customer class as determined by the public water supply.**
- (c) A water shortage response plan for emergencies.**

(4) The ~~initial~~ study to determine the quantity of water supply needed, as required by subrule (1) **of this rule**, shall be submitted to the department by January 1, ~~1984~~ **2013**, or at the time a new finished water source is proposed.

~~(5) If the owner of a type I public water supply fails to provide an adequate study of water supply requirements, the department may determine the quantity of water supply needed for that public water supply and notify the owner of its determination. A permit~~ **Permits** shall not be issued by the department to a public water supply unless an approved study of water supply quantity requirements is available ~~or unless a determination is made by the department pursuant to this subrule.~~

R 325.11204 Required capacity of waterworks systems; ~~compliance date; applicability.~~

Rule 1204. ~~(1) A supplier of water of a type I public water supply shall provide sufficient capacity in the waterworks system to meet the approved finished water supply requirements. That capacity may be 1 or any combination of the following:~~

- ~~(a) Rated capacity from an approved surface water supply or complete treatment system.~~
- ~~(b) Firm capacity from an approved groundwater supply where firm capacity equals the flow with the largest producing well out of service.~~
- ~~(c) The available capacity obtained under contract and capable of delivery from another approved public water supply.~~
- ~~(d) Finished water storage capacity in excess of the established normal waterworks system requirements.~~

~~(2) Compliance with this rule by type I public water supplies in operation on the effective date of these rules is required by January 1, 1985. If compliance is achieved prior to January 1, 1985, the requirements of this rule shall be met thereafter.~~

~~(3) Compliance with this rule may be required by the department prior to January 1, 1985, pursuant to an administrative order issued by the director.~~

R 325.11205 Minimum number of wells; ~~compliance date.~~

Rule 1205. ~~(1) For type I public water supplies where groundwater is the sole source of water supply, a minimum of 2 wells, with separate pumping units as required, shall be provided.~~

~~(2) Compliance with this rule for public water supplies in operation on the effective date of these rules is required within 5 years from the effective date of these rules.~~

R 325.11206 Interruption of power service; applicability; compliance date.

Rule 1206. ~~(1) For a~~ **A** type I public water supply **that serves 50 or more service connections or 200 or more people, shall provide** a means ~~shall be provided to~~ continuously supply finished water to the entire distribution system during periods when the normal power service is interrupted.

~~(2) This rule does not apply to type I public water supplies serving less than 50 service connections or serving less than 200 individuals, or to those, except public water supplies serving facilities which are licensed annually by the department including, but not limited to, mobile home parks and health care facilities~~ **until January 1, 2016. This rule applies to all**

**type I public water supplies, including those that serve fewer than 50 service connections or fewer than 200 people, beginning January 1, 2016.**

~~(3) Compliance with this rule is required by January 1, 1985.~~

### PART 13. CONSTRUCTION PLANS AND SPECIFICATIONS AND PERMITS

R 325.11301 Purpose.

Rule 1301. ~~The purpose of this part~~ **applies to type I and type II public water supplies. This part** ~~is to prescribe requirements of suppliers of water of type I and type II public water supplies regarding the submission of plans and specifications or other pertinent information for the construction or alteration of a waterworks system, or a portion thereof of a waterworks system, and the procedures for issuance of~~ **to be met to receive** permits by the department for that construction or alteration. **For the purpose of this part, a supplier of a proposed type I or type II public water supply is considered a public water supply.**

R 325.11302 Submission of plans and specifications for construction or alteration of waterworks system; guidance material.

Rule 1302. (1) For type I public water supplies, before the construction or alteration of any waterworks system, or a portion thereof **of a waterworks system**, plans and specifications shall be submitted to the department by a ~~supplier of water or his~~ **public water supply or its** designated agent for review, approval, and issuance of a permit, unless otherwise accepted by ~~subrule (2) of~~ **under** R 325.11304.

(2) A ~~transmittal letter~~ **permit application** shall be submitted with the plans and specifications, shall identify and summarize plans or projects, and, if applicable, shall indicate the authorization of the designated agent for the ~~supplier of water~~ **public water supply**.

~~(3) A supplier of water shall use the materials set forth in the recommended standards for water works, prepared by the Great Lakes Upper Mississippi board of state sanitary engineers, whenever applicable, as guidance when preparing plans and specifications for submission to the department for a waterworks system, or portion thereof.~~ **Both of the following shall be used, whenever applicable, when preparing plans and specifications:**

**(a) Recommended standards for water works, prepared by the Great Lakes Upper Mississippi board of state sanitary engineers under R 325.10113.**

**(b) Suggested practices for waterworks design, construction and operation for type I public water supplies, prepared by the Michigan department of environmental quality, water bureau under R 325.10113.**

R 325.11303 Engineering report or basis of design; approval.

Rule 1303. (1) If requested by the department, a ~~supplier of water~~ **public water supply** shall submit an engineering report for a significant project or a basis of design, or both, for approval by the department, before plans and specifications are submitted for the construction or alteration of any portion of a waterworks system.

(2) The department may reject or return any plans and specifications submitted by a ~~supplier of water~~ **public water supply** for the construction or alteration of a waterworks system, or any portion thereof **of a waterworks system**, unless an engineering report or basis of design, or both, as requested by the department, have been approved.

R 325.11304 Type I and type II public water supplies; construction details and sketch of proposed waterworks system; replacement of watermain and appurtenances; permit.

Rule 1304. (1) ~~Suppliers of water of type~~ **Type II** public water supplies shall submit construction details and an acceptable scaled drawing properly dimensioned showing important aspects of the general layout of a proposed waterworks system, or portion thereof **of a waterworks system**, and shall obtain a permit for the construction or alteration of all source facilities and any treatment facilities which are to be employed for public health purposes **pumping facilities, distribution systems, and storage facilities, and any treatment for public health purposes or treatment such as chemical injection that may affect public health**, prior to construction.

(2) ~~Suppliers of water of type~~ **Type I** public water supplies are not required to submit plans and specifications or to obtain a permit for the replacement of an adequately sized watermain or other appurtenance on a distribution system which does not affect flow or capacity.

R 325.11305 Review of plans and specifications by department.

Rule 1305. (1) Upon receipt of plans and specifications or other pertinent information for the construction or alteration of a waterworks system, or ~~any portion thereof~~ **of a waterworks system**, the department shall review them as soon as practicable to determine their completeness with regard to the minimum requirements specified by these rules, and to determine their adequacy. In making its review, the department shall not approve the plans and specifications unless it determines that the waterworks system, or portion thereof **of a waterworks system**, is designed to protect the public health.

(2) If the department determines that plans and specifications or other pertinent information are incomplete or inadequate, it shall notify the ~~supplier of water~~ **public water supply** or authorized agent and may request the submission of revised plans and specifications or other pertinent information with appropriate corrections or additions. The department shall not grant an approval of these submittals or issue a permit until the plans and specifications or other pertinent information are complete and are judged to be adequate.

(3) The department may designate an agent or representative, including a local health department, for the purposes of reviewing information submitted and issuing permits for type II public water supplies, where appropriate.

R 325.11306 Approval of plans and specifications; permit.

Rule 1306. (1) Upon a determination by the department that the plans and specifications or other pertinent information for the construction or alteration of a waterworks system, or portion thereof **of a waterworks system**, are complete and adequate, the department shall mark the plans or scaled drawing showing approval and shall issue a permit to the ~~supplier of water~~ **public water supply**.

(2) A permit issued ~~pursuant to~~ **under** the act and these rules shall expire unless construction or alteration commences within 2 years from the date of issuance. A ~~supplier of water~~ **public water supply** may apply for a permit extension in accordance with these rules prior to expiration of a permit. A request for a permit extension shall be submitted in writing identifying the project and the number on the permit issued by the department for which the extension is requested and the reason for requesting the extension.

R 325.11308 Permit terms and conditions.

Rule 1308. The department may attach any term or condition to a permit issued ~~pursuant to~~ **under** the act and these rules to a ~~supplier of water~~ **public water supply** that it deems

necessary to assure proper construction, alteration, and operation of a waterworks system, or a portion ~~thereof~~ **of a waterworks system**, to protect the public health.

R 325.11310 Construction program minimizing operational interference with existing waterworks system.

Rule 1310. The department may request a ~~supplier of water~~ **public water supply** to submit for approval a program for construction which minimizes operational interference with an existing waterworks system, and which allows the ~~supplier of water~~ **public water supply** to maintain continuous service of water to customers or users of that waterworks system in a safe and reliable manner. If requested, the program shall be submitted before commencing construction or an alteration of a waterworks system.

R 325.11311 Revocation of permit.

Rule 1311. The department may revoke a permit if it determines that a ~~supplier of water~~ **public water supply** or ~~a~~ **its** designated agent ~~thereof~~ is not constructing or making an alteration to a waterworks system in accordance with approved plans and specifications, other approved information, or the act. The department shall notify the ~~supplier of water~~ **public water supply** ~~prior to~~ **before** revocation of the permit and ~~afford him the~~ **provide an** opportunity to take ~~any~~ corrective action as may be required. The department shall revoke the permit and simultaneously order the ~~supplier of water~~ **public water supply** to halt ~~any~~ construction authorized by that permit if the ~~supplier of water~~ **public water supply** does not effect the corrections within a reasonable period of time.

#### PART 14. CROSS-CONNECTIONS

R 325.11402 Compliance with regulations and local codes.

Rule 1402. A connection with a public water supply system shall comply with existing laws, ordinances, and rules including:

(a) ~~Act No. 266 of the Public Acts of 1929, as amended, being §§338.901 to 338.917 of the Michigan Compiled Laws.~~ **The State Plumbing Act, 2002 PA 733, as amended, being MCL 338.3511 to 338.3569.**

(b) Local ordinances or rules providing acceptable protection against cross connections.

R 325.11404 Local cross connection control programs.

Rule 1404. (1) A water utility shall develop a comprehensive control program for the elimination and prevention of all cross connections. The plan for the program shall be submitted to the department for review and approval ~~within 1 year after the effective date of these rules~~. When the plan is approved, the water utility shall implement the program for removal of all existing cross connections and prevention of all future cross connections.

(2) The program shall include but not be limited to all of the following:

(a) A complete description of the method of administering the program, including the designation of inspection and enforcement agency or agencies. The local authority for implementation of the program shall be indicated, preferably by ordinance.

(b) A time schedule for inspection and reinspection of all water utility customers' premises for possible cross connections. The periodic reinspection shall be to ascertain whether or not safe air gaps or required protective devices are in place and in working order.

(c) A description of the methods and devices, as approved by the department, used to protect the public water supply.



R 325.11405 Corrections and protective devices.

Rule 1405. (1) A user of public water supply shall obtain written approval by the water utility or authorized inspection agency of any proposed corrective action or protective device before using or installing it.

(2) The total time allowed for completion of the necessary corrections shall be contingent upon the degree of hazard involved and include the time required to obtain and install equipment. If ~~he~~**the** cross connection has not been removed, after a reasonable period of time, the water utility shall physically separate the public water supply from the onsite piping system in such a manner that the 2 systems cannot again be connected by any unauthorized person.

(3) A water utility shall report annually to the department on the status of the cross connection control program on a form provided by the department.

## PART 15. OPERATION REPORTS AND RECORDKEEPING

R 325.11501 Purpose.

Rule 1501. The purpose of this part is to establish requirements of certain ~~suppliers of water~~**public water supplies** for the periodic submission of operation reports and for the retention of certain records as required by the provisions of the act and the federal act.

R 325.11502 Monthly operation reports ~~required from suppliers of water of public water supplies~~ employing treatment.

Rule 1502. (1) A ~~supplier of water of a community water system supply~~ where treatment is employed or ~~of a noncommunity water system supply~~ where treatment is employed for public health purposes, **or treatment such as chemical injection that may affect public health**, shall prepare an operation report on a form provided by the department for each month of operation. The report shall identify areas where data entry is required under R 325.10719e, R 325.10719f, R 325.10720, and R 325.10720a and shall include all of the following information:

- (a) General operation data, including turbidity determinations.
  - (b) A summary of samples analyzed, including distribution system sampling and residual disinfectant concentration.
  - (c) Information on daily treatment system pumpage.
  - (d) Information on chemical application.
  - (e) Analyses of general parameters relating to the quality of the treated drinking water.
- (2) The operation report shall be submitted to the department during the month following the month for which the operation report was prepared, unless otherwise ~~noted~~**required** in part 7 of these rules.

R 325.11504 Annual reports.

Rule 1504. (1) ~~At the end of the first calendar year after the effective date of these rules and each subsequent year, each~~**Each** type I public water supply which does not submit a monthly operation report shall submit an annual report on a form provided by the department. The department may require certain type II public water supplies to submit annual reports. The report shall include, but not necessarily be limited to, a summary of water pumpage and water use.

(2) The ~~supplier of water~~**type I public water supply** shall submit the annual report to the ~~division~~**department** on or before March 31 following the year ~~for which~~**covered by** the report ~~is prepared~~.

R 325.11505 Additional reports required by department.

Rule 1505. (1) The department may require a ~~supplier of water~~ **public water supply** to submit reports required ~~pursuant to~~ **under** this part on a more frequent basis if the department finds that discrepancies, violations, or other problems are or may be occurring based on the department's review of a monthly or annual operation report or based on a sanitary survey, on site inspection, surveillance observation, or special investigation conducted by the department.

(2) The department may require a ~~supplier of water~~ **public water supply** to submit other reports as it deems necessary to evaluate the adequacy of the public water supply.

R 325.11505a Submission of C \* T calculations.

Rule 1505a. A ~~supplier of water who~~ **public water supply** that employs a disinfectant shall, within 6 months of a written request from the department, submit a determination of the C\*T calculations. The ~~supplier of water~~ **public water supply** shall submit the supporting data as necessary for the department to determine compliance with the provisions of R 325.10611a(2)(a).

R 325.11506 Retention of Records; **generally.**

Rule 1506. (1) A ~~supplier of a~~ community or noncommunity water ~~system~~ **supply** shall retain, on its premises or at a convenient location near its premises, all of the following records:

(a) Records of bacteriological analyses that are required under part 7 of these rules, which shall be kept for not less than 5 years.

(b) Records of chemical analyses that are required under part 7 of these rules, which shall be kept for not less than 10 years.

(c) Records of **microbiological analyses and** turbidity analyses that are required under part 7 of these rules, which shall be kept for not less than ~~3-5~~ years.

(d) Records of radiological analyses that are required under part 7 of these rules, which shall be kept for not less than 10 years.

(e) Original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, department determinations, and any other information that is required under R 325.10604f(2) to ~~(4)~~ **(5)**, **R 325.10410**, and **R 325.10710a to R 325.10710c**, which shall be retained for not less than 12 years.

(f) Results of the disinfection profile and benchmark, which shall be retained indefinitely.

**(g) Copies of monitoring plans developed under these rules shall be kept for the same period of time as the records of analyses taken under the plan are required to be kept under this subrule, except as specified elsewhere in these rules.**

(2) Actual laboratory reports for chemical, bacteriological, turbidity, disinfection profile and benchmark, and radiological analyses shall be kept; however, the analyses data may be transferred to tabular summaries if all of the following information is included:

(a) The date, place, and time of sampling and the name of the person who collected the sample.

(b) Identification of the sample as a routine distribution system sample, check sample, raw or treated water sample, or other special purpose sample.

(c) The date of the analysis.

(d) The laboratory and the person who was responsible for performing the analysis.

(e) The analytical technique or method used.

(f) The results of the analysis.

(3) Records of action taken by the ~~supplier~~ **supply** to correct violations of the state drinking water standards shall be kept for not less than 3 years after the last action taken with respect to the particular violation.

(4) Copies of any written reports, summaries, or communications which relate to sanitary surveys of the public water supply and which were conducted by the public water supply itself, by a private consultant, by the ~~division~~ **department**, or by any local, state, or federal agency shall be kept for not less than 10 years after completion of the sanitary survey involved.

(5) Records that involve a variance or an exemption that was granted to a public water supply shall be kept for not less than 5 years after the expiration date of the variance or exemption.

(6) Records that involve any emergency or public notification regarding a public water supply shall be kept for not less than 3 years after the emergency or public notification.

~~(7) A subpart H system that employs conventional filtration or direct filtration treatment and that recycles spent filter backwash water, thickener supernatant, or liquids from dewatering process shall collect and retain on file all of the following recycle flow information for review and evaluation by the department:~~

~~(a) Copy of the recycle notification and information submitted to the department under 40 CFR §141.76(b), which is adopted by reference. The adopted material is available from the superintendent of documents at the address in R 325.10116(b) for a cost of \$61.00 at the time of adoption of these rules. The adopted material is available for inspection, or copies are available at no cost from the offices of the department at the address in R 325.10116(a).~~

~~(b) A list of all recycle flows and the frequency with which they are returned.~~

~~(c) The average and maximum backwash flow rate through the filters and the average and maximum duration of the filter backwash process in minutes.~~

~~(d) The typical filter run length and a written summary of how filter run length is determined.~~

~~(e) The type of treatment provided for the recycle flow.~~

~~(f) Data on the physical dimensions of the equalization or treatment units, or both, typical and maximum hydraulic loading rates, type of treatment chemicals used and average dose and frequency of use, and frequency at which solids are removed, if applicable.~~

#### **R 325.11507 Retention of Records; filterbackwash.**

**Rule 1507.** A subpart H supply that employs conventional filtration or direct filtration treatment and that recycles spent filter backwash water, thickener supernatant, or liquids from dewatering process shall collect and retain on file all of the following recycle flow information for review and evaluation by the department:

(a) Copy of the recycle notification and information submitted to the department under 40 CFR §141.76(b), which is adopted by reference. The adopted material is available from the superintendent of documents at the address in R 325.10116(b) for a cost of \$61.00 at the time of adoption of these rules. The adopted material is available for inspection, or copies are available at no cost from the offices of the department at the address in R 325.10116(a).

(b) A list of all recycle flows and the frequency with which they are returned.

(c) The average and maximum backwash flow rate through the filters and the average and maximum duration of the filter backwash process in minutes.

(d) The typical filter run length and a written summary of how filter run length is determined.

(e) The type of treatment provided for the recycle flow.

(f) Data on the physical dimensions of the equalization or treatment units, or both, typical and maximum hydraulic loading rates, type of treatment chemicals used and average dose and frequency of use, and frequency at which solids are removed, if applicable.

**R 325.11508 Retention of records; enhanced treatment for Cryptosporidium.**

(1) Subpart H supplies that are subject to the enhanced treatment for Cryptosporidium provisions in R 325.10611d, also called "supplies" in this rule shall keep results from the initial round of source water monitoring under 40 CFR 141.701(a), as adopted by reference in R 325.10720b, and the second round of source water monitoring under 40 CFR 141.701(b), as adopted by reference in R 325.10720b, until 3 years after bin classification under R 325.10611e for the particular round of monitoring.

(2) Supplies shall keep a notification to the department that they will not conduct source water monitoring due to meeting the criteria of 40 CFR 141.701(d), as adopted by reference in R 325.10720b, for 3 years.

(3) Supplies shall keep the results of treatment monitoring associated with microbial toolbox options under R 325.10611i to R 325.10611m for 3 years.

**R 325.11509 Retention of records; groundwater supply rules.**

Rule 1509. In addition to the requirements of R 325.11506, a groundwater supply subject to R 325.10612 shall maintain all of the following information in its records:

(a) Documentation of corrective actions shall be kept for a period of not less than **10** years.

(b) Documentation of notice to the public as required under R 325.10408c shall be kept for a period of not less than **3** years.

(c) Records of decisions under R 325.10739(1)(e)(ii) and records of invalidation of fecal indicator-positive groundwater source samples under R 325.10739(3) shall be kept for a period of not less than **5** years.

(d) For consecutive supplies, documentation of notification to the wholesale supply or supplies of total-coliform positive samples that are not invalidated under R 325.10707a shall be kept for a period of not less than **5** years.

(e) For groundwater supplies, including wholesale supplies, that are required to perform compliance monitoring under R 325.10739a all of the following shall be kept:

(i) Records of the department-specified minimum disinfectant residual shall be kept for a period of not less than **10** years.

(ii) Records of the lowest daily residual disinfectant concentration and records of the date and duration of any failure to maintain the department-prescribed minimum residual disinfectant concentration for a period of more than 4 hours shall be kept for a period of not less than **5** years.

(iii) Records of department-specified compliance requirements for membrane filtration and of parameters specified by the department for department-approved alternative treatment and records of the date and duration of any failure to meet the membrane operating, membrane integrity, or alternative treatment operating requirements for more than 4 hours shall be kept for a period of not less than **5** years.

**PART 16. GENERAL PLANS**

**R 325.11601 Purpose.**

Rule 1601. ~~It is the purpose of this~~ **This** part ~~to establish~~**es** requirements of certain ~~suppliers of water~~ **public water supplies** for the submission and updating of waterworks system general plans to satisfy the requirements of subsection (1) of section 4 of the act.

R 325.11602 Type I and type II public water supplies; submission of general plans to department.

Rule 1602. (1) ~~General plans~~ **A current general plan** for type I public water supplies **that address the pertinent requirements of this part** shall be submitted to the department ~~within 2 years after the effective date of these rules, except that this subrule shall not apply to those type I public water supplies serving less than 50 service connections or less than 200 persons and those serving facilities which are licensed annually by the department, including, but not limited to, mobile home parks and health care facilities~~ **by January 1, 2016.**

(2) The department, by written notice, may require suppliers of water of specific type II public water supplies to provide a copy of a general plan of a waterworks system. A supplier of water **The public water supply** so notified shall provide a copy of a general plan to the department within 1 year after receipt of the written notice.

R 325.11603 ~~Acceptability of previous general plans; updating~~ **Updating** requirements.

Rule 1603. (1) ~~Suppliers of water~~ **Public water supplies** having previously provided a general plan to the department meet the requirements of this part unless the department determines that the plans previously submitted are inadequate **or outdated.**

(2) ~~The department may require the updating of a waterworks system general plan required pursuant to this part on a periodic basis by providing written notice to the supplier of water. The supplier of water so notified shall provide an updated general plan to the department~~ **Upon receiving written notice from the department, public water supplies shall provide an updated general plan** within 6 months ~~after receipt of the written notice.~~

R 325.11604 Contents of general plans **for all applicable systems.**

Rule 1604. (1) ~~The required general plan for a waterworks system shall contain, at a minimum, all of the following information, where pertinent~~ **a description of the waterworks system, including both of the following:**

(a) The general layout of the entire waterworks system, including treatment systems and distribution systems, and the location of valves, hydrants, storage tanks, watermains, ~~and their size,~~ pumps, wells, and pumping facilities.

(b) ~~An identification of locations in the distribution system where the pressure may be less than 20 psi during peak flow.~~

(c) ~~An identification of the entire area served or proposed to be served by the public water supply.~~

(d) ~~Rated capacity of the waterworks system, including capacity of the developed water source, treatment system, storage tanks, pumping facilities, and equipment to maintain system reliability.~~

(2) ~~A supplier of water may include with the general plan additional information, including, but not necessarily limited to, the number of service connections, fire fighting capabilities, location of access roads, chemical delivery features, standby power, laboratory facilities, location of sampling stations, and a description of the meter system.~~

R 325.11605 **Additional general plan requirements for community water supplies that have a distribution system intended to provide fire protection.**

Rule 1605. The general plan for a waterworks system that has a distribution system intended to provide fire protection purposes shall include all of the following information:

(a) A hydraulic analysis of the distribution system identifying locations in the distribution system where the pressure may be less than 35 psi during peak flow and less than 20 psi during emergencies such as fire flows.

- (b) An inventory of water main by size and material and age.
- (c) Service area maps including existing and future service area boundaries.

**Rule 325.11606. Additional general plan requirements for publicly owned or operated community water supplies.**

**Rule 1606. (1)** The general plan for a waterworks system that is publicly owned or operated shall include a capital improvements plan that identifies water system needs for 5-year and 20-year planning periods.

**(2)** A publicly owned or operated community system may include additional information with the general plan, including but not limited to the current reliability study, annual pumpage report, sampling site plan, source water protection plan, water conservation program, waterworks operation and maintenance programs, regional planning documents, and relevant zoning and land use plans for the service area.

## PART 17. OWNERSHIP OF PUBLIC WATER SUPPLIES

**R 325.11703 Applicability and general requirements.**

~~Rule 1703. (1) After January 4, 1979, these rules shall apply to all privately owned type I public water supplies, except those serving facilities which are licensed annually by the department, including, but not limited to, mobile home parks and health care facilities.~~

**Except as noted in this part, this part applies to both of the following:**

**(a) A private owner that proposes to construct a privately owned type I public water supply.**

**(b) A privately owned type I public water supply.**

~~(2) This part applies to all type I public water supplies which are proposed to be constructed after the effective date of these rules, and to any proposed substantial additions or modifications to a type I public water supply which is privately owned on the effective date of these rules, if the department determines that the operation of that public water supply does not meet the requirements of the act or these rules. The department shall approve a new privately owned public water supply only by issuance of a permit. To receive from the department a permit to construct a type I public water supply, the owner of the proposed type I public water supply shall perform all of the following:~~

~~(a) Submit to the department the information required under part 13 of these rules.~~

~~(b) Submit to the department proof of refusal to accept ownership or operational responsibility of that public water supply from the governing entity under whose jurisdiction the public water supply is included, as required under R 325.11705.~~

~~(c) On a form provided by the department, stipulate to conditions required by the department to ensure the public water supply will meet the requirements of the act and these rules. The conditions shall include, but are not limited to all of the following:~~

~~(i) Supply water to the public according to the act and these rules and transfer the supply to the governmental entity by an acceptable agreement between the parties as required under R 325.11706.~~

~~(ii) Establish and maintain an escrow fund under R 325.11707 to R 325.11708.~~

~~(iii) Provide or obtain easements, or isolation areas, or both, and abandon wells as required under R 325.11709.~~

~~(iv) Provide service connections to no more than the number provided for in the permit to construct as required under R 325.11710.~~

~~(v) Receive department approval before transferring ownership of the supply as required under R 325.11711.~~

(vi) Provide contact information of system operation personnel as required under R 325.11712.

(3) A privately owned public water supply whose classification under Part 5 of these rules changes to type I shall comply with subrule (2)(b) and (c) of this rule.

(4) A new owner of a privately owned type I public water supply shall comply with subrule (2)(b) and (c) of this rule as required under R 325.11711.

R 325.11707 Escrow fund.

Rule 1707. (1) ~~In accordance with section 10 of the act, the owner of a type I public water supply, which is proposed to be privately owned, shall establish~~ **The purpose of a continuing cash escrow fund prior to the issuance of a permit, which fund shall be available to the department for immediate repairs, improvements, operations, or maintenance of the public water supply if the owner fails to meet the responsibilities under the act and these rules.**

(2) The amount of the escrow fund required shall be calculated on the basis of ~~\$100.00~~ **\$500.00** per living unit proposed to be served by the public water supply, but in no case shall the escrow fund amount be less than ~~\$5,000.00~~ **\$10,000.00**, or exceed \$50,000.00.

(3) Upon establishment of a written agreement between the ~~owner of a privately owned public water supply and the governing body of a city, village, or township which establishes a date certain by which the privately owned public water supply ownership shall be transferred to that governing body,~~ the department may reduce the amount of the required escrow fund.

(4) When the ownership of a privately owned public water supply is transferred to the ~~governing body of a city, village, or township,~~ the department shall authorize return of the escrow fund and accrued interest to the owner of the ~~privately owned waterworks system from which the public water supply was transferred.~~

(5) When additional living units are added, a type I public water supply with an established escrow fund shall recalculate the escrow amount based on the sum of existing and proposed number of living units and increase its escrow fund accordingly.

R 325.11708 Removal **and replacement** of funds from escrow account.

Rule 1708. (1) Upon a determination by the department that removal of funds from an escrow account is required, only the director or his designated agent may remove funds from the escrow account to make the necessary corrections.

(2) It is the responsibility of the owner of a privately owned ~~waterworks system~~ **type I public water supply** to replace all funds removed from the account by the director or his designated agent as required for needed improvements or corrections to the waterworks system within 90 days after removal of the funds to maintain the account at the original level.

(3) **If the financial institution that created the escrow fund sends notice that it intends to terminate the escrow fund, the public water supply shall obtain an alternate escrow fund within 30 days after termination.**

R 325.11711 Transfer of ownership of a privately owned ~~waterworks system~~ **type I public water supply.**

Rule 1711. (1) If ownership of a privately owned ~~waterworks system~~ **type I public water supply** is transferred to another private owner, the former owner shall notify and receive approval from the department ~~not less than 90 days prior to~~ **before** the change in ownership. ~~The escrow fund established for that waterworks system shall be maintained by the new owner.~~

**(2) The new owner shall comply with R 325.11703(2)(b) to (c).**

R 325.11713 Approval of a privately owned public water supply **Rescinded.**

~~Rule 1713. The department shall approve a privately owned public water supply only by issuance of a permit, and in addition, shall stipulate with the owner for entry of a consent order outlining the specific operation and maintenance requirements of that waterworks system and the amount of the escrow fund required. If the owner of the privately owned waterworks system refuses to stipulate to the entry of a consent order, the department shall not issue a permit for the privately owned waterworks system.~~

**PART 19. EXAMINATION AND CERTIFICATION OF OPERATORS**

R 325.11904 Notification of change in classification.

Rule 1904. (1) A ~~supplier of water of a~~ public water supply affected by a change in classification shall be notified by the department by mail. A change in classification by the department shall be effective 6 months after the date of the next applicable examination.

(2) The classification of a newly constructed waterworks system shall be effective at the time of initial operation.

R 325.11906a Restricted certificates for existing operators.

Rule 1906a. (1) The owner of a waterworks system classified for the first time as a result of these revised rules as a class F-5, class D-5, or class S-5 system may designate to the department an operator currently employed by the owner as the certified operator in charge of the system. ~~Such~~**The** designation shall be made within 90 days after notification by the department that the system has been classified as such or within 2 years from ~~the effective date of these revised rules, whichever date comes first~~ **December 8, 2000.**

~~(a) If the class F-5, class D-5, or class S-5 system has an acceptable record of compliance with the safe drinking water act requirements and provided that the designated operator attends a specific department approved training program, the department shall issue a site specific, restricted certification to the operator designated in subrule (1) of this rule~~ **this subrule.**

(2) The owner of a waterworks system reclassified as a result of these revised rules may designate to the department a properly certified operator currently employed by the owner as the operator in charge of the system and any other properly certified operator or operators currently employed by the owner as a shift operator or operators. ~~Such~~**The** designation shall be made within 90 days after notification by the department that the system has been reclassified or within 2 years from ~~the effective date of these revised rules, whichever date comes first~~ **December 8, 2000.**

~~(a) The department shall issue site specific, restricted certification to the operator or operators designated in subrule (2) of this rule~~ **this subrule.**

(3) The owner of a manufactured housing community waterworks system may designate to the department an operator currently employed by the owner as the certified operator in charge of the system or portion of the system. ~~Such~~**The** designation shall be made within 90 days after notification by the department of the system's classification or reclassification as such or within 2 years from ~~the effective date of these revised rules, whichever date comes first~~ **December 8, 2000.**

~~(a) Provided that the designated operator attends a specific department approved training program, the department shall issue site specific, restricted certification to the operator designated in subrule (3) of this rule~~ **this subrule.**

(4) **With the concurrence of the advisory board, the department may issue site specific, restricted certification to an operator on a case-by-case basis.** An operator



issued restricted certification under this rule is only authorized to operate the waterworks system or portion of the system that is designated on the restricted certificate issued to him or her, except such operator may operate any other waterworks system or portion of a system for which he or she holds certification for. An operator with a restricted certification is subject to the same requirements for performance as other certification classes and the certificate may be suspended or revoked or the operator placed on probation in accordance with R 325.11917.

R 325.11908 Advisory board; powers and duties.

Rule 1908. (1) The advisory board shall meet not less than twice each year at designated times and places and shall advise the department in program implementation and any revisions to the operator certification program. The advisory board shall assist the department in examining all persons making application for certification who meet the minimum requirements established by the department pursuant to R 325.11911. The advisory board shall schedule at least 1 annual examination for treatment system operators in the F-1, F-2, F-3, F-4 and D-1, D-2, D-3, D-4 classes and at least 1 annual examination for the distribution system operators in the S-1, S-2, S-3, S-4 classes, and shall provide public notice of the date, time, and place for each examination not less than 90 days before the date set for the examination.

(2) The advisory board shall approve a protocol for the examination of operators in class F-5, class D-5, and class S-5 systems.

(3) After review of the application and the results of the examination, the department shall issue or deny an applicant a certificate in the appropriate public water supply classification.

**(4) The advisory board shall evaluate and either approve or disapprove continuing education training, shall categorize such training as technical, managerial or other and shall determine the continuing education training hour value in each category. All continuing education training approved by the advisory board shall relate to the duties, responsibilities, operation, maintenance, or supervision of a drinking water system.**

R 325.11913 ~~Equivalent certificate~~ **Rescinded.**

~~Rule 1913. (1) The department shall prepare an application form to be used by applicants for an equivalent certificate. A waterworks system operator issued certification pursuant to the provisions of R 325.1009 of the Michigan Administrative Code that does not hold a current certificate, and who submits a complete application for an equivalent certificate within 1 year after the application form becomes available from the department may, under the conditions specified in subrule (2) of this rule, be issued a new certificate of comparable classification. Equivalent certificates for an individual who holds multiple certificates shall only be issued for the higher class within the appropriate waterworks system category.~~

~~(2) The department shall, on the basis of an evaluation of the information provided on the application form for an equivalent certificate, determine if the equivalent certificate is to be issued. An individual has no longer than 2 years from the effective date of these rules to complete the required continuing education requirements as prorated from the certificate's expiration date. The department shall issue a certificate upon approval. A restricted certificate is valid only for the waterworks system designated on the certificate.~~

~~(3) Equivalent certificates issued shall state all of the following information:~~

~~(a) The certified individual's name.~~

~~(b) The certification class or classes.~~

~~(c) The date of certificate expiration.~~

~~(d) The official certificate number. In addition, a restricted certificate shall name the water system for which the certificate is valid.~~

R 325.11915 Renewal requirements.

Rule 1915. (1) The department shall renew a certificate on a 3-year cycle. To renew a certificate, a certificate holder shall submit, to the department, an application for renewal on a form provided by the department.

2) To have a certificate renewed, a holder of ~~an F-1 or F-1 (restricted), F-2 or F-2 (restricted), F-3 or F-3 (restricted), D-1 or D-1 (restricted), D-2 or D-2 (restricted), D-3 or D-3 (restricted), S-1 or S-1 (restricted), S-2 or S-2 (restricted), S-3 or S-3 (restricted)~~ certificate shall have completed, during the renewal cycle, not less than 24 hours of advisory board-approved training or continuing education, regardless of the category or class or number of certificates held. To have a class F-4 or F-4 (restricted), D-4 or D-4 (restricted), or S-4 or S-4 (restricted) certificate renewed, a certificate holder shall have completed, during the renewal cycle, not less than 12 hours of advisory board-approved training or continuing education. To have a class F-5, class D-5 or class S-5 certificate renewed, a certificate holder shall have completed not less than 9 hours of advisory board-approved training or continuing education during the renewal cycle.

3) ~~To have a certificate issued under R 325.11906a(1) renewed, a certificate holder shall have completed not less than 9 hours of advisory board-approved training or continuing education during the renewal cycle and the water system shall have an acceptable record of compliance with safe drinking water act requirements.~~

4) To have a certificate issued under R 325.11906a(2) or (3) renewed, a certificate holder shall meet any applicable renewal requirements described in subrules (1) and (2) of this rule. **a drinking water certification shall satisfy the minimum criteria established by the department for continuing education requirements as outlined in the following table:**

**Table 2. Minimum requirements for continuing education**

<b>Highest certification level held</b>	<b>Minimum number of continuing education training hours required to renew</b>	<b>Minimum number of continuing education training hours categorized as technical, managerial, or both</b>
<b>1 or 2</b>	<b>24</b>	<b>18</b>
<b>3</b>	<b>24</b>	<b>12</b>
<b>4</b>	<b>12</b>	<b>6</b>
<b>5</b>	<b>9</b>	<b>no minimum</b>

(53) Types of education or training programs that may be approved include, but are not limited to:

(a) Association programs that are sponsored by any of the following entities:

- (i) American water works association.
- (ii) Township, municipal, and county organizations.
- (iii) Professional and trade organizations.
- (iv) National rural water association.

~~(b) Home study courses~~ **Distance learning**, such as videotapes, audiocassettes, and **DVDs**, correspondence courses **and online courses**.

(c) Private contractor technical courses.

(d) University, college, and community college courses.

(e) Department and environmental protection agency sponsored training programs.

(f) Training sponsored by nationally recognized organizations.

(g) Water utility in-service training.

~~(64)~~ A holder of a certificate shall be responsible for renewal of a certificate regardless of notification.

~~(75)~~ A certificate holder shall keep his or her own record of approved training, education, and work experience and be prepared to present proof of that training, education, and experience if required by the department.

~~(86)~~ The failure of an applicant for renewal to meet the requirements of this subrule and subrules (1) to ~~(75)~~ of this rule shall constitute grounds for refusing to renew a certificate.

~~(97)~~ For a holder of multiple certificates within a category, the department shall only renew the certificate representing the higher class within a waterworks system category.

~~(108)~~ A holder of a certificate who is not eligible for renewal or who has been refused renewal pursuant to the provisions of subrules (1) to ~~(97)~~ of this rule may apply for examination pursuant to the provisions of R 325.11910.

~~(149)~~ A holder of a certificate who has not met the continuing education requirements of subrule (2) of this rule for his or her certification may be issued a certificate for the classification within the same category for which the continuing education requirements have been met. A certificate that is not renewed shall expire.

#### R 325.11917 Suspension or revocation of certificates.

Rule 1917. (1) After notice and a hearing before the advisory board, the director may **deny exam application to an individual or** place on probation, suspend, or revoke the certificate of an operator if the director determines that any of the following provisions apply:

(a) The operator is incompetent or unable to properly perform the duties of a waterworks system operator.

(b) ~~The~~ **An individual or** operator has committed fraud or has falsified an application, **examination**, report, or record with respect to ~~his or her application or with respect to a~~ water supply.

(c) The operator has been negligent in the discharge of properly assigned duties or responsibilities with respect to a water supply.

**(d) An individual or operator has impersonated or misrepresented a certified operator or falsified a certificate of completion or training record.**

(2) The department shall provide a notice of probation, suspension, or revocation, in writing, to the operator and to the owner of the public water supply where the operator is employed.

(3) The department shall not accept an application for examination during the time period of suspension for an operator who has a suspended certificate.

(4) Upon recommendation of the advisory board, the director shall determine the length of suspension of a certificate.

(5) Renewal of a suspended certificate is allowed if the applicant meets all renewal requirements including the training and continuing education requirements; however, the renewal does not affect the terms of suspension in any way.

(6) The department shall not accept an application for examination from an operator for a period of 5 years from the effective date of the revocation of certificate.

(7) Upon recommendation of the advisory board, the director may place a certified operator on probation for up to 2 years in accordance with the provisions of subrule (1) of this rule. A certificate holder who is placed on probation is subject to the terms and conditions of the order of probation.

## PART 21. APPROVAL OF CHEMICALS AND OTHER MATERIALS

R 325.12102 Approval of chemicals and other materials.

Rule 2102. (1) Approval by the department is required for all chemicals, coatings or paints, proprietary products, and similar materials of whatever description, that are used or are proposed for use in, or in contact with, drinking water at any point in the waterworks system from the source to the ultimate point of distribution of the water.

(2) ~~The supplier of water~~ **public water supply** is responsible for determining that approval for a chemical or material has been granted by the department and determining the special conditions or limitations under which that approval was granted.

(3) **All chemicals or components that may come in contact with water intended for use in a public water supply shall meet ANSI/NSF standards which are hereby adopted by reference. The department adopts by reference ANSI/NSF standards 60-2005 Drinking Water Treatment Chemicals (September 11, 2005) as amended by 60-2005 Addendum 1 (October 24, 2006) and 61-2007a Drinking Water System Components (July 18, 2007). The adopted material is available from NSF at 789 North Dixboro Road, Ann Arbor, MI 48105, telephone 734-827-6817, Internet address <http://www.nsf.org> for a cost at the time of adoption of these rules of \$325.00 for 60-2005, \$45.00 for 60-2005 Addendum 1 and \$325.00 for 61-2007a. The adopted material is available for inspection at the offices of the department at 525 W Allegan Street, Lansing, Michigan.**

PART 23. ~~CONTINGENCY PLANS~~ **EMERGENCY RESPONSE PLANS**

R 325.12301 Purpose.

Rule 2301. The purpose of this part is to establish requirements of ~~suppliers of water of type I public water supplies and certain type II public water supplies to prepare contingency plans for implementation in the event of emergencies~~ **plans and procedures and identify personnel and equipment that can be implemented or utilized in the event of an emergency, including a terrorist or other intentional attack on the public water supply.**

R 325.12302 Preparation; timetable; exceptions.

Rule 2302. (1) Unless specifically waived by the department, ~~suppliers of water of a type I public water supplies~~ **supply**, including ~~suppliers of water purchasing a type I public water supply that purchases~~ water from another ~~supplier of water~~ **public water supply**, shall prepare, or cause to be prepared, ~~contingency plans for waterworks systems~~ **an emergency response plan** within 2 years after the effective date of ~~this rule.~~ **these rules.** ~~This subrule shall not apply to type I public water supplies serving less than 50 service connections or less than 200 individuals or those type I public water supplies serving facilities which are licensed annually by the department, including, but not limited to, mobile home parks and health care facilities.~~

(2) The department may require ~~suppliers of water of certain type II public water supplies to prepare contingency plans~~ **emergency response plans** in accordance with the requirements of this part.

(3) ~~If a supplier of water~~ **public water supply** has an existing ~~contingency~~ **emergency response plan**, it ~~may~~ **shall** be updated **on the schedule contained in the plan** to include any requirements specified by this part, ~~and upon updating, shall be deemed to meet the requirements of this part.~~

R 325.12303 Contents.

Rule 2303. (1) ~~A contingency plan prepared by a supplier of water~~ **An emergency response plan** shall, as a minimum, outline a program for rapid correction or mitigation of emergencies **and shall include actions, procedures, and an identification of equipment which can significantly lessen the impact of terrorist acts or other intentional actions on the public health and the safety and supply of drinking water provided to the public.** The ~~contingency~~ **emergency response plan** may ~~contain an~~ include, but is not limited to all of the following:

(i) **Roles and responsibilities for waterworks personnel in an emergency.**

(ii) **An inventory of necessary standby personnel, emergency response equipment, first aid supplies, replacement equipment, chemicals, and other materials readily available for correction of problems.**

(iii) **Operational procedures to be implemented in an emergency,** including emergency treatment measures in the event of contamination, **mutual aid agreements with other public water supplies, personnel safety measures such as evacuation plans and lock down procedures, and water sampling and monitoring plans to identify potential public health threats.**

(iv) **Identification of alternate water sources available in a short term situation as well as for a long term duration, such as a plan for interconnection with adjacent public water supplies or agreements with water haulers in the event of waterworks system failures or loss of pressure.**

(v) **Both internal and external communication procedures in the event of an emergency, including** ~~and~~ appropriate means for notification of customers or users of a public water supply affected by an emergency. Public notification shall include a description of precautions or measures to be taken to protect the health of those customers or users.

(2) ~~A contingency~~ **An emergency response plan** prepared by a supplier of water pursuant to ~~under~~ this part shall include the general plan of the public water supply ~~owned or operated by the supplier of water as required pursuant to~~ **under** subsection (1) of section 4 of the act.

(3) ~~A supplier of water~~ **public water supply** shall identify in a ~~contingency~~ **an emergency response plan** the type, number, and capacity of standby power sources to operate a waterworks system in the event of a power outage or other situation requiring the use of other power sources.

(4) ~~The contingency~~ **emergency response plan** shall ~~outline duty assignments for waterworks personnel and~~ shall contain a schedule for updating the plan.

(5) ~~The contingency~~ **emergency response plan** shall include a listing of critical customers or users for whom the provision of a continuous supply of safe drinking water is most urgent.

(6) ~~Contingency plans~~ **An emergency response plan** prepared pursuant to this part shall be located and distributed as necessary to assure effective use ~~thereof~~ **of the emergency response plan** by all necessary waterworks system personnel.

(7) For purposes of consistency in developing ~~contingency~~ **emergency response plans,** ~~suppliers of water~~ **public water supplies** may use the American waterworks association manual M 19, emergency planning for water-utility management, ~~1973 utilities, in R 325.10113,~~ as guidance material.

R 325.12304 Emergency procedure.

Rule 2304. (1) When an emergency affecting a public water supply is discovered, the ~~supplier of water~~ **public water supply** shall immediately notify the ~~division~~ **department** by telephone of that emergency. The ~~supplier of water~~ **public water supply** shall indicate in that notification the type of emergency, its discovery, the cause, the corrective actions

planned to meet the emergency, and plans for notification to customers or users of the public water supply affected.

(2) A ~~supplier of water~~ **public water supply** shall, within 90 days after an emergency, file a written report with the department outlining in detail its discovery, the cause, the corrective actions taken by the ~~supplier of water~~ **public water supply** to meet the emergency, and the procedures by which its customers or users were notified. The report shall outline in detail the area of the waterworks system affected by the emergency, its duration, and the ability of the ~~supplier of water~~ **public water supply** to cope with the emergency by providing an adequate supply of safe drinking water.

## PART 25. LICENSING OF WATER HAULERS

R 325.12503 Application for license.

Rule 2503. ~~Within 2 years after the effective date of these rules, a~~ **A** person engaged in the business of hauling water for drinking or household purposes shall apply for a license using a license application form provided by the department.

R 325.12505 Source and quality of water; chlorine; storage tanks.

Rule 2505. (1) All water hauled by a water hauler shall meet state drinking water standards and shall be from a public water supply or other source approved by the department.

(2) A water hauler shall add chlorine, in an amount specified by the department, when receiving water from a source and upon delivery of the water after hauling. The amount of chlorine to be added in each instance shall be specified on the license issued by the department for the water transportation tank. The department may require chlorine residual tests of the water hauled upon receipt of the water from the source, after addition of chlorine, and at delivery of the water. At the point of delivery of the water, a free chlorine residual of 1.0 mg/l is required. The department may approve an alternate means of disinfection upon written request by a water hauler **or may not require disinfection while hauling if the water is delivered to a water bottling facility and disinfected prior to use by the public.**

(3) When transporting water to a public water supply, a water hauler shall deliver water only to tanks or facilities approved by the department.